§ 154.903 Inert gas systems: General.

(a) Inert gas carried or generated to meet §§154.901, 154.902, and 154.1848 must be non-flammable and non-reactive with the cargoes that the vessel is certificated to carry and the materials of construction of the cargo tanks, hold and interbarrier spaces, and insulation.

(b) The boiling point and dewpoint at atmospheric pressure of the inert gas must be below the temperature of any surface in those spaces or −45 °C (−49 °F), whichever is warmer.

(c) For the temperatures and pressures at which the gas is stored and used, storage vessels and inert gas piping must meet §§154.450 and 154.500 respectively.

§ 154.904 Inert gas systems: Controls.

The inert gas system must have:

(a) At least one check valve in the cargo area to prevent the back flow of cargo vapor into the inert gas system, or another means specially approved by the Commandant (CG–522);

(b) If the inert gas system is in the machinery space or another space outside the cargo area, a second check valve in the cargo area meeting paragraph (a) of this section;

(c) Automatic and manual inert gas pressure controls; and

(d) Valves to isolate each inerted space.


§ 154.906 Inert gas systems: Controls.

The inert gas system must have:

(a) At least one check valve in the cargo area to prevent the back flow of cargo vapor into the inert gas system, or another means specially approved by the Commandant (CG–522);

(b) If the inert gas system is in the machinery space or another space outside the cargo area, a second check valve in the cargo area meeting paragraph (a) of this section;

(c) Automatic and manual inert gas pressure controls; and

(d) Valves to isolate each inerted space.

§ 154.1000 Applicability.  
Sections 154.1005 through 154.1020 apply to flammable cargo and ammonia carriers.

§ 154.1002 Definition.  
For the purposes of §§154.1005 through 154.1020, “gas-dangerous” does not include the weather deck of an ammonia carrier.

§ 154.1005 Equipment approval.  
(a) Electrical equipment that is required to be intrinsically safe or explosion proof under §154.1010 must be specially approved by the Commandant or listed as intrinsically safe or explosion proof by an independent laboratory that is specially approved by the Commandant (CG–522), for Class I Division I locations and the Group that is specified in Table 4 for the cargo carried.  
(b) Each submerged cargo pump motor installation must be specially approved by the Commandant (CG–522).

(c) Electrical equipment that must be intrinsically safe to meet §154.1010 must meet the definition in §110.15–100(i) of this chapter.  
(d) Electrical equipment that must be explosion proof to meet §154.1010 must meet §110.15–65(e) of this chapter.

§ 154.1010 Electrical equipment in gas-dangerous space or zone.  
(a) Except as allowed in this section, electrical equipment must not be installed in a gas-dangerous space or zone.  
(b) Intrinsically safe electrical equipment and wiring may be in a gas-dangerous space or zone.  
(c) A submerged cargo pump motor may be in a cargo tank if:  
(1) Low liquid level, motor current, or pump discharge pressure automatically shuts down power to the pump motor if the pump loses suction;  
(2) There is an audible and visual alarm at the cargo control station that actuates if the motor shuts down under the requirements of paragraph (c)(1) of this section; and  
(3) A lockable circuit breaker that disconnects the power to the motor;  
(4) A supply cable for a submerged cargo pump motor may be in a hold space.  
(5) A hold space that has a tank that is not required to have a secondary barrier under §154.459 may only have:  
(1) Through runs of cable;  
(2) Explosion-proof lighting fixtures;  
(3) Depth sounding devices in gastight enclosures;  
(4) Log devices in gastight enclosures; and  
(5) Impressed current cathodic protection system electrodes in gastight enclosures.

(f) A space that is separated by a gastight steel boundary from a hold space that has a cargo tank that must have a secondary barrier, under the requirements of §154.459, may only have:  
(1) Through runs of cable;  
(2) Explosion-proof lighting fixtures;  
(3) Depth sounding devices in gastight enclosures;  
(4) Log devices in gastight enclosures; and  
(5) Impressed current cathodic protection system electrodes in gastight enclosures.

(g) A cargo handling room may only have:  
(1) Explosion-proof lighting fixtures; and  
(2) Through runs of cable.

(h) A space for cargo hose storage may only have:  
(1) Explosion-proof lighting fixtures; and  
(2) Through runs of cable.

(i) A space that has cargo piping may only have:  
(1) Explosion-proof lighting fixtures; and  
(2) Through runs of cable.

(j) A gas-dangerous zone on the weather deck may only have:  
(1) Explosion-proof equipment that is for the operation of the vessel; and  
(2) Through runs of cable.